



PDC-85A4G 4.25Gbps GaAs PIN Photodiode Chip

Overview

The Lasermate PDC-85A4G is a GaAs photodiode chip with high responsivity at 850nm, low dark current and low capacitance. PDC-85A4G is designed for use in 4.25Gbps fiber optic data communication applications.



Features

- GaAs PIN photodiode chip
- Data rate: 4.25Gbps
- High responsivity at 850nm
- Optimized for fiber optic application
- Low dark current and low capacitance
- Non-hermetic design

Applications

- High speed Data communications
- Gigabit ethernet
- Fiber channel

Specifications

Absolute Maximum Ratings				
Parameters	Min.	Max.	Unit	Conditions
Storage temperature	-40	100	°C	
Operating temperature	-40	85	°C	
Reverse current		2	mA	T = 25°C
Forward current		10	mA	T = 25°C
Reverse voltage		20	V	T = 25°C

Electro-Optical Characteristics (T = 25°C)						
Parameters	Symbol	Min.	Typ.	Max.	Unit	Conditions
Responsivity	R	0.55	0.65		A/W	$V_R = 1.5V, \lambda = 850nm$
Dark current	I_D		0.1	1	nA	$V_R = 5V$
Breakdown voltage	V_{BD}	50			V	$I_R = 10\mu A$
Capacitance	C		0.36	0.45	pF	$V_R = 1.5V, f = 1MHz$
			0.34	0.43		$V_R = 5V, f = 1MHz$
Bandwidth	BW	5.0			GHz	$V_R = 1.5V$

Typical Characteristics

Fig 1. Typical Dark Current vs. Forward Current

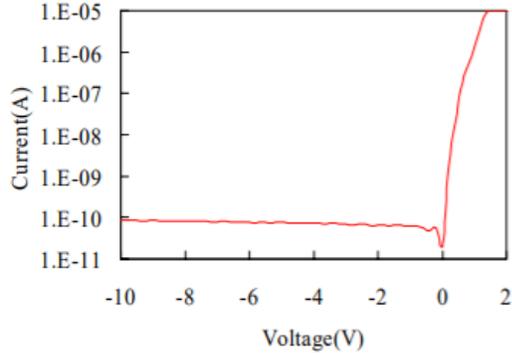


Fig 2. Typical Photo-Current

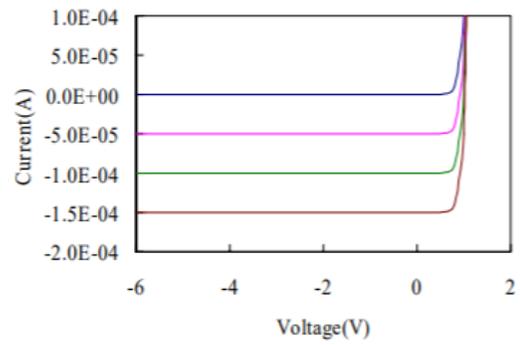


Fig 3. Typical Breakdown Curve

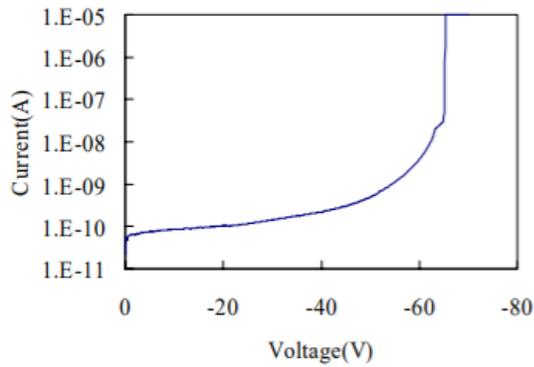
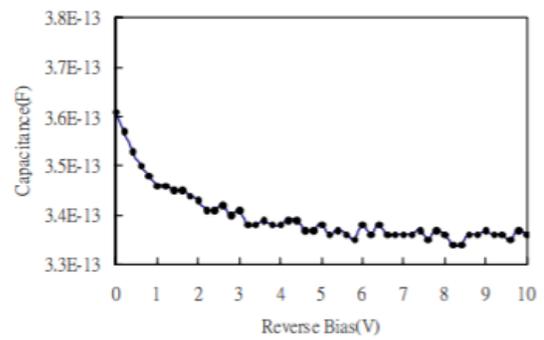
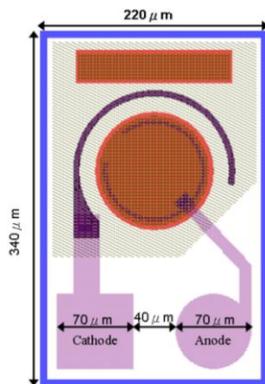


Fig 4. Typical C-V Curve



Outline Diagram



- Chip size: 220μm x 340μm typical
- Chip thickness: 200μm ±12.5μm
- Sensitive area: Typical 90μm in diameter

Note: Specifications are subject to change without notice.